

Rohan Kumar Biswal

LinkedIn: Rohan Kumar Biswal

Email: rohanbiswal@iisc.ac.in

Mobile: 8435939541



ACADEMIC PROFILE

- **Indian Institute of Science, Bangalore** 2027
M.Tech in Computational and Data Sciences CGPA: 8.9
- **Maulana Azad National Institute of Technology, Bhopal** 2018
B.Tech in Mechanical Engineering CGPA: 8.24
- **Delhi Public School, Nigahi** 2014
Class XII (CBSE) Percentage: 92%
- **Delhi Public School, Nigahi** 2012
Class X (CBSE) CGPA: 10

ACADEMIC PROJECTS

- **Tensor Moore Penrose Inverse via Partitioning** Mar'25– Apr'26
M.Tech Coursework Student
Developed a stable algorithm for computing Moore Penrose Inverse of sequentially arriving data via Partitioning principles in higher order Tensors.
Numerically verified norm errors vs SVD based Inverses.
- **SVD-Based Image Compression** Sep'25–Oct'25
M.Tech Coursework Student
Applied low-rank SVD approximation to RGB image channels using energy-based rank selection with 99% Frobenius norm preservation.
Numerically verified SVD error bounds, confirming equality of computed and theoretical 2-norm and Frobenius-norm residuals.
Analysed compression versus transmission cost and reconstructed high-fidelity images from truncated SVD factors.
- **PageRank Using Power Iteration** Oct'25–Nov'25
M.Tech Coursework Student
Constructed a Markov transition matrix from a directed graph and computed PageRank via power iteration in Python.
Studied convergence behaviour using residual norms and Rayleigh quotient analysis.
- **Optimisation of a Multi-Link Robotic Arm** Oct'25–Nov'25
M.Tech Coursework Student
Implemented inverse kinematics optimisation in Python for a 3-link planar robotic arm using gradient descent.
Computed gradients using central-difference numerical differentiation and minimised end-effector position error.
Compared gradient descent and momentum-based optimisation, analysing convergence speed and stability.

ACHIEVEMENTS

- GATE 2025: All India Rank (AIR) 03 in Engineering Sciences (XE).
- GATE 2025: All India Rank (AIR) 96 in Mechanical Engineering (ME).
- GATE 2019: All India Rank (AIR) 27 in Mechanical Engineering (ME).

WORK EXPERIENCE

- **Indian Oil Corporation Limited** Sep'19–Jun'23
Officer / Operation Officer / Sr. Operation Officer 52 Months
Managed and planned the dispatch of finished petroleum products from Paradip Refinery to destinations across India, ensuring timely and efficient supply chain operations.
Oversaw oil tanker operations, including scheduling, loading and compliance with safety and regulatory standards.
Coordinated with logistics, refinery teams and transport partners to optimise dispatch plans and minimise downtime.
- **Indian Oil Corporation Limited** Jun'23–Feb'24
Assistant Manager (RS)
Monitored sales metrics and implemented improvement plans to achieve monthly and annual sales targets.
Led the commissioning and launch of new retail outlets, managing end-to-end setup, branding and operational readiness.
Drove sales growth through strategic planning, promotional campaigns and on-ground marketing initiatives.

TECHNICAL SKILLS

- **Programming Languages:** Python, C++, C
- **Libraries:** NumPy, Pandas, SciPy, Matplotlib, Pytorch, Seaborn

CERTIFICATIONS

- Certificate of Merit — CBSE, 2012
- All India Senior School Certificate Examination — CBSE, 2014

LANGUAGES

English, Hindi and Odia.